

Music Digital

MIDI STUDIO

Users Manual - Commodore

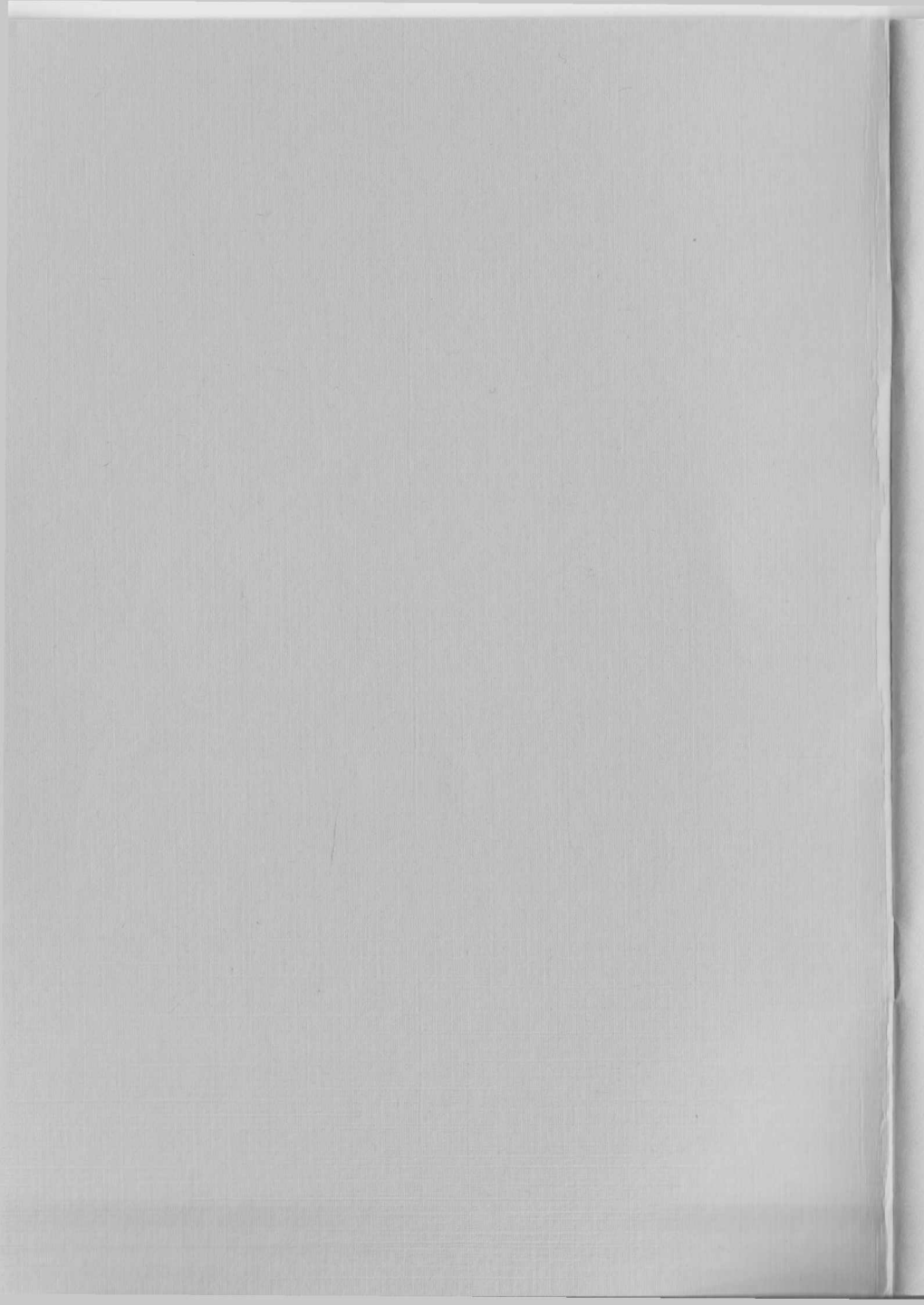


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MIDI STUDIO Owners' manual for the Commodore 64

First Edition - July, 1985

by

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INTRODUCTION

Welcome to the musical world of MIDI STUDIO, an introductory MIDI Recording Studio brought to you by SYNTECH, Inc. We hope you enjoy many hours of music making with your MIDI STUDIO.

MIDI is an acronym for Musical Instrument Digital Interface, a convention which has been adopted by the major synthesizer manufacturers to allow their units to transfer data (or "talk") from one to another, or to other electronic data devices such as a computer. This data takes the form of a stream of hexadecimal numbers (or "data bytes") which are output from your synthesizer in addition to the audio signal as you play. In the MIDI convention, different numbers have different meanings which convey such information as which note was played, the amount of keyboard velocity (requires a velocity-sensitive keyboard) of the note played, which patch or program number was chosen, etc. The most basic use of MIDI is to allow more than one synthesizer to be played from one keyboard, but many other exciting possibilities exist, such as the recording capabilities of your MIDI STUDIO.

MIDI STUDIO is designed to be used with a Commodore computer, a SYNTECH (or compatible) MIDI-Interface cartridge, and one or more electronic music synthesizers with MIDI capability. Used properly, MIDI STUDIO offers you the convenience and versatility of a multi-track tape recording studio combined with the precision and sophistication of a computer.

With MIDI STUDIO, you can record synthesizer music in as many as eight separate sequences which you can then link together to form a song. Both the song and the individual sequences can be saved on diskettes to be retrieved for playback at a later time.

The songs and sequences you create on your MIDI STUDIO can be used with the other Commodore Sequencer software from Third Street Software. Check with your local dealer for more information on SYNTECH products.

While MIDI STUDIO is intended to be simple and fun to use even for the computer novice, not all of its functions are self-evident from looking at the computer screen. A short time spent reading this manual will more than pay for itself in time saved as you use the MIDI STUDIO

CHECK LIST OF NECESSARY EQUIPMENT

You will need the following items to use your MIDI STUDIO:

1. MIDI STUDIO Master Disk
2. A blank disk for your music data
3. MIDI Interface Card (SYNTECH, Passport, or Yamaha)
4. Commodore Computer
5. Monitor (color or black & white T.V. or video monitor)
6. Commodore disk drive
7. One or more electronic music synthesizers with MIDI capability
8. Audio playback systems (anything from a small guitar amp to a state of the art audio system)
9. Assorted connecting cables

START-UP PROCEDURE

1. Make sure the Commodore, disk drive, and video monitor are installed and operating properly.
2. With the POWER OFF, insert your MIDI Interface device into the Commodore Computer.
3. Make sure the synthesizer(s) and audio system are also installed and working properly.
4. Using standard MIDI cables (5-pin DIN), connect the MIDI OUT jack on your MIDI Interface card to the MIDI IN jack on your synthesizer, then connect the MIDI OUT jack on your synthesizer to the MIDI IN jack on the Interface card. If you are using more than one synthesizer, connect the MIDI THRU jack on your main synthesizer, to the MIDI IN jack on your #2 synthesizer, the MIDI THRU jack on #2 to the MIDI IN on #3, etc.
5. Turn on the power to your Commodore and your disk drive.
6. Insert your MIDI STUDIO Master Disk in the disk drive.
7. Type LOAD "*",8,1 on the Commodore keyboard and press return.
8. Wait for your MIDI STUDIO to load and when the disk drive stops running, you will see a message which says:

PLEASE REMOVE YOUR FACTORY DISK

Remove your MIDI STUDIO Master Disk and press RETURN when you are ready.

IMPORTANT NOTE: DISK DRIVE NOISE

When loading your MIDI STUDIO from disk, you may notice your disk drive "chattering" the way it does when you format a diskette. This is entirely normal and nothing to worry about.

CHAPTER ONE

GETTING STARTED

The first screen you will see when your MIDI STUDIO begins is:

PPQN

{24}

USE F1 TO SET PPQN RETURN TO CONTINUE

This screen allows you to choose the number (24, 48, or 96) of pulses per quarter note (PPQN) at which you wish your MIDI STUDIO to operate. This number should correspond to the PPQN put out by your drumbox; if you don't know which PPQN your drumbox uses, consult your drumbox instruction manual (most drumboxes use a PPQN = 24).

Press F1 on your Commodore keyboard to change the PPQN number. If you have no drumbox, leave the PPQN at 24 for now. When you have selected the proper PPQN number, press RETURN and your MIDI STUDIO will display the Main System Screen. This is the screen from which you will do all of the operations required to record and edit music and make a song, so we will discuss its features in detail.

Note: See Appendix-B for NOTE PULSE NUMBERS.

SYSTEM SCREEN

Make sure your screen shows the System Screen. It should look like this:

TEMPO= 1		99	SONG	
COUNT DWN OFF			01. []	
MIDI DRUM OFF			02. []	
			03. []	
			04. []	
			05. []	
			06. []	
			07. []	
			08. []	
			09. []	
			10. []	
			11. []	
CTR 001:01:01				
REC		PLAY >	<< >>	12. []
SEQ		A B C D E F G H		
TRACK		-1- -2- -3- -4- -5- -6- -7- -8-		
CHANNEL				
SONG MENU				
f1		f3	f5	f7
SECTION +		SEQUENCE +	INSERT	EXIT

Notice the two lines at the bottom of the screen labeled "MAIN MENU". There should be a dark line flashing on and off through the center of these two lines, indicating that the choices shown ("SEQUENCE+", "TRACK+", "SET END", and "NAME SEQ") are presently active.

Press F1 for "SEQUENCE+"; the lighter color (yellow on a color monitor) on the "A" in the "SEQ" line in the middle of the screen should move to the "B". If you hold down F1, the lighter color (consider it a cursor) should move rapidly through the letters from left to right. These letters denote the eight different Sequences (A-H) which are available to you. When the cursor is on a given Sequence letter, any recording, editing, saving or loading you do will affect that Sequence and that Sequence only.

Now hold down either "SHIFT" key. A different set of four choices is displayed under MAIN MENU, labeled now "F2", "F4", "F6", and "F8". While holding the "SHIFT" key down, press F2 for "SEQUENCE-" and watch the lighter color move from right to left through the Sequence letters. The second set of four choices ("SEQUENCE-", "TRACK-", "APPEND SEQ", and "TEMPO") is available only when the "SHIFT" key is depressed.

Find the "CTRL" (for Control) key on the Commodore keyboard and hold it down. A third set of four choices ("ERASE SEQ", "SONG", "DISK", and "BLANKS") is displayed labeled "F1", "F3", "F5", and "F7", respectively.

Finally, hold down the "CTRL" key and at the same time hold down either "SHIFT" key. Yet another set of four choices appears ("CHANNEL +", "AUTO-CORR", "PROG CHGS" AND "ERASE TRACK") labeled "F2", "F4", "F6", and "F8", respectively.

There are sixteen choices available to you from the "MAIN MENU" even though only four are visible at any time. Each menu in your MIDI STUDIO works the same way, although not all the menus have as many as sixteen choices. You might think of these as the different Levels of each menu. Remember, for each menu there are as many as four different Levels:

Level 1. Regular - no SHIFT or CTRL key used.

Level 2. Shifted - press either SHIFT key.

Level 3. Control - press the CTRL key.

Level 4. Shift + Control - hold down either SHIFT key and the CTRL key at the same time.

These keys let you see the different Levels of the menus; to activate a choice, you must also press the appropriate function key on the Commodore keyboard while the choice you want is visible.

We'll discuss each Level of each menu fully, but first let's record a little music so we have something to work with.

Make sure the Sequence cursor (the lighter-colored letter in the "SEQ" line) is on letter "A" and make sure the Track cursor is on "-1-" in the "TRACK" line.

"TAPE" CONTROLS

Notice the box at the middle left of your screen which looks like the following:

| REC PLAY > << >> |

These are the "Tape" Controls which are designed to simulate the action of a conventional tape recorder. The "Tape" Controls and the Counter ("CTR 001:01:01" in the middle left corner of the screen) should be highlighted in white. Whenever the "Tape" Controls and the Counter are highlighted, the "Tape" functions (Record, Playback, Reverse, and Fast Forward) are active (enabled).

FIRST RECORDING

Now hold down the "/" key - the "REC" button of the "Tape" Controls lights up (red). Hold down the "/" and press the SPACE BAR - the "REC" button and PLAY button will light and a metronome will sound through the speaker in your video monitor (make sure you have the volume up on your TV set or video monitor). At the bottom of the screen where the menu bar was, you will see a message which reads:

PRESS SPACE BAR OR FOOTSWITCH TO STOP

Also, you may notice the numbers at the right end of the Counter counting very rapidly. Your MIDI STUDIO is now ready to record on "Track -1-" of "Sequence A".

To record, all you need to do is to play your synthesizer keyboard. As soon as you play a note, the middle numbers in the Counter will start to count, indicating that the recording process has begun. Play a little music (at least four measures or so) and then press the SPACE BAR to stop. Notice that both the "A" in the "SEQ" line and the "-1-" in the "TRACK" line are now displayed in reverse field. This indicates that they have been recorded.

Press F1 to move to "Sequence B". Now the "-1-" in the "TRACK" line is not in reverse field because "Track -1-" in "Sequence-B" hasn't been recorded yet. Hold down SHIFT and press F2 to move back to "Sequence A".

EXPLANATION OF COUNTER NUMBERS

The columns of numbers in the Counter Box are like the tape counter on a tape recorder, but with more musical precision.

The Left 3-digits count measures

The Middle 2-digits count beats within a measure

The Right 2-digits pulses within a beat

Press the SPACE BAR to play the Sequence you just recorded and watch the Counter moving. The Counter tells you where you are within the Sequence. Press the SPACE BAR to stop the playback - the Counter stops. Press the SPACE BAR again - the playback resumes from the place where you stopped.

The counter always counts in 4/4 time. If whenever you reach the fourth beat on the counter the next beat will go to the next measure and beat.

Stop the playback in the middle of your Sequence and press F3 to move the Track cursor from "-1-" to "-2-". Now hold down the "/" key, press the SPACE BAR, and play your synthesizer. You are recording on Track -2- of Sequence A, starting from the place in the middle of the Sequence where you had stopped. When you reach the END of the Sequence, the recording process will stop and the Counter will return to "001:01:01". You have just done your first overdub.

Press the SPACE BAR to play your Sequence and hear that the part you just added did indeed start in the middle. Either while the Sequence is playing or when it is stopped, press the "1" key your Commodore. The reversed "-1-" in the Track line should turn black, and, if the Sequence is playing, the sound from Track #1 should stop. This is how you MUTE a Track in MIDI STUDIO - simply press its number; whether the Sequence is running or not. To unMUTE the Track, press its number again (see Chapter Five).

REVERSE & FAST FORWARD

The two cursor keys of your Commodore keyboard activate the Reverse and Fast Forward functions of the "Tape" Controls. Use "CURSOR LEFT" for Reverse and "CURSOR RIGHT" for Fast Forward. Holding either cursor key down will move the "Tape" Counter in a manner similar to a tape recorder; hitting the cursor key once will increment or decrement the CTR counter to the next or last beat.

PLUS & MINUS (+,-)

Use the "PLUS" key and the "MINUS" key on your Commodore keyboard like the cursor keys described above, but notice that the PLUS and MINUS keys affect the pulse readings of the Counter rather than the beat readings.

HOME & SHIFTED HOME

Pressing the "HOME" key on the Commodore keyboard will move the Counter immediately to the beginning of the Sequence, and holding down SHIFT and pressing HOME will move the Counter immediately to the END of the Sequence.

Before moving on to the discussion of the menus, let's take a brief look at the other features of the System Screen. The box in the upper left corner of the screen contains three indicators which tell you the status of your MIDI STUDIO.

TEMPO

The speed of the Commodore Internal Clock. It is also set from Level Two of the MAIN MENU. When MIDI STUDIO begins, the TEMPO is initialized to 100 Quarter notes per minute.

MIDI DRUM OFF

This function is toggled on and off by pressing "M" on the Commodore keyboard. When it is "ON", MIDI DRUM causes your MIDI STUDIO to send out Clock information from the MIDI OUT jack on your MIDI Interface card. This allows you to drive a drumbox or another sequencer (or both) from the MIDI STUDIO.

COUNT DWN OFF

This stands for "COUNT DOWN OFF" and refers to the count-off feature of your MIDI STUDIO. COUNT DOWN is turned on and off by pressing "C" on your Commodore keyboard. Once you have recorded the first Track of a Sequence or set an END to establish the length of a Sequence, the COUNT DOWN will be in effect. Make sure the indicator says "COUNT DWN ON" and then start recording from the BEGINNING of the Sequence; a box will appear in the middle of the screen with the number 4 on it. This number will count down to zero accompanied by the sound of the metronome, giving you one measure of count-off before the beginning of the Sequence before you start recording. If you are not at the beginning of the Sequence when you start recording the Count Down will be bypassed.

MEMORY (99)

This display gives you an indication of the amount of recording memory remaining at any given time. It is an indicator only - you cannot change it except indirectly through the processes you execute in MIDI STUDIO. The MEMORY display starts out reading "99" and counts down from there as you fill up the computer memory; however, like some automobile fuel gauges, the MEMORY indicator stays "full" for a while before showing reduced levels - it doesn't begin decremeting until about 20% of the recording memory has been used.

NOTE:

When you are using your MIDI STUDIO you may notice that, at certain TEMPOs, the metronome which you hear through the speaker of your video monitor or TV set sounds a bit irregular. The engineering staff of Third Street Software has determined that this is due to the lack of precision in the firing of the envelope in the SID (Sound Interface Device) chip in the Commodore, and does NOT reflect any irregularity in the Internal Clock itself. You can assure yourself that this is true by turning on the MIDI STUDIO MIDI DRUM output (press "M" on the Commodore keyboard) and using it to play a simple test pattern on your drumbox at various speeds.

CHANNEL

This line displays the MIDI Channel override assignments for each Track. CHANNELS are assigned in Levels One and Two of the EDIT Menu (See detailed discussion in Chapter Three).

Now that you have some familiarity with the System Screen and its features, let's take a look at the choices available in the other MIDI STUDIO menus.

CHAPTER TWO

MAIN MENU

The MAIN MENU of MIDI STUDIO is a four-level Menu which allows you to do some general processes and to choose other Menus (or Sub-menus) which offer different sets of choices. The MAIN MENU is also the central point of MIDI STUDIO. MIDI STUDIO begins at the MAIN MENU and an EXIT from another Menu returns you to the MAIN MENU.

ANY TIME YOU SEE A FLASHING MENU AT THE BOTTOM OF YOUR SCREEN (as opposed to a message) YOU MAY PRESS THE "UP ARROW" KEY ON YOUR COMMODORE KEYBOARD FOR AN INSTANT RETURN TO THE MAIN MENU.

LEVEL ONE

F1 SEQUENCE+

As discussed in the Introduction, pressing F1 allows you to choose a Sequence on which to work. The current Sequence in effect is denoted in the "SEQ" line by a lighter color (yellow on a color monitor). Hold F1 down and watch the highlighted Sequence letter move from left to right. Consider this highlighted letter to be the "Sequence Cursor".

If the Sequence Cursor is on Sequence "E", for example then any recording or editing that you do will be done to Sequence "E" only. The METER display will come from Sequence "E". The TRACK and CHANNEL lines will also reflect the information in Sequence "E".

F3 TRACK+

Pressing F3 allows you to choose which Track within the current Sequence you wish to work on. The current Track in effect is denoted in the "TRACK" line by a lighter color (yellow). Consider this to be the "Track Cursor".

For example, with the Track Cursor on "Track -3-", any recording or punching you do will be done to "Track -3-" only. Editing processes which operate on one track at a time will be done to "Track -3-" only. Some processes affect the entire Sequence; in that case the position of the Track cursor is irrelevant.

F5 SET END

Use F5 to set the END of the current Sequence (Remember all Sequences must be at least one beat long). First move the CTR counter to the point at which you wish the Sequence to END, then press F5.

If the END you are setting will make the Sequence shorter, a message appears which reads:

ENDING HERE MAY DESTROY SOME DATA
IS THIS END CORRECT? (Y/N)

Check the counter to make sure that the END is where you want it and if it is, press "Y" for yes. If you press "N", the old END will reappear in the END counter and no operation will take place.

If the end you are setting will NOT make the Sequence shorter, the message which appears is:

IS THIS END CORRECT? (Y/N)

In this case it is safe to just press "Y" for yes and then listen to the Sequence to be sure you have it right. If it isn't what you want, you can reset it because you haven't lost any data.

If you ever desire to see where a given Sequence ends move the Sequence cursor to the appropriate Sequence and press Shifted Home. Since this command takes you to the end of the Sequence the position of the end will appear in the counter.

There are several uses for this SET END feature:

1. If, when you record the first Track of a Sequence and you fail to press the SPACE BAR or the FOOTSWITCH to stop recording at precisely the time you intended, you can set the END so the Sequence has the right length without having to re-record the Sequence.
2. You can set the END before you record any Tracks in the Sequence. This allows you to use the COUNT DOWN feature to get a measure of count-off before recording, and/or record a Sequence with a rest (silence) at the beginning.

F7 NAME SEQ

This feature allows you to give a eight character name to the current Track. Press F7, eight periods (".....") appear on the middle left of the screen where the word "SEQ" was. A message appears at the bottom of the screen which says:

ENTER NAME & PRESS RETURN TO CONTINUE

MIDI STUDIO allows you to enter up to eight letters or numbers for the name of any Sequence. Spaces are not accepted; the only separators allowed are "." and "/". If you make a typing error, you can use the DELETE key of your Commodore keyboard to move the cursor to the left. When you have entered the right name, press RETURN.

F2 SEQUENCE

Moves the Sequence Cursor from right to left.

F4 TRACK

Moves the Track Cursor from right to left.

F6 APPEND SEQ

This stands for APPEND SEQUENCE and refers to a process which adds the entire current Sequence on to the END of whichever destination Sequence you specify. Hold down SHIFT and press F6, in a window at the bottom of the screen you will see a message which says:

APPEND SEQ <X> TO WHICH SEQUENCE?
<X> USE +/- TO SELECT RETURN TO CONTINUE

There are three different cases of which you should be aware. You can:

1. APPEND the current Sequence to itself. This will double the length of the current Sequence.
2. APPEND the current Sequence to an empty Sequence. This will copy the current Sequence into another Sequence; use this case for making a back-up copy of the current Sequence.
3. APPEND the current Sequence to another recorded Sequence. This will tack the current Sequence on to the END of the destination Sequence, so if you like to work with building blocks, this can be a powerful tool.

Press "+" or "-" to select a destination Sequence and when you have it right, press RETURN. The message in the window at the bottom of the screen changes to:

APPEND: SEQUENCE <X> TO SEQUENCE <Y> ARE YOU SURE?
PRESS "Y" OR "N"

Press "Y" and MIDI STUDIO takes over. All of these cases use as much memory as the current Sequence itself occupies, so manage your use of APPEND carefully. The MEMORY indicator at the top of your screen should give you an idea of just how much memory your APPENDS are using.

F8 TEMPO

Press F8 to set the TEMPO (speed) of the Internal Clock generated by your MIDI STUDIO. The screen fades, the TEMPO line in the upper left box is highlighted, and this message appears at the bottom of the screen:

USE +/- TO SET TEMPO RTN TO CONTINUE

Press "+" OR "-" to step through the range of TEMPOs offered by the MIDI STUDIO. Fifty different TEMPO settings are available, from 44 to 240 quarter notes per minute, stepped in increments of 4. The TEMPO setting becomes part of the data of the Sequence, allowing you to assign different speeds to different Sequences and then create SONGS (chains of Sequences) with TEMPO changes intact.

MIDI STUDIO remembers the last TEMPO selection you make so that you can record one Sequence (at 80 for example) and then move to another UNRECORDED Sequence and record it at the same TEMPO without having to select the TEMPO again. RECORDED Sequences display their assigned TEMPO's as you move the cursor past them, but UNRECORDED Sequences are all ready to be recorded at the last TEMPO you selected.

F1 ERASE SEQ

Use F1 to ERASE the current Sequence. Hold down CTRL and press F1. The window at the bottom of the screen displays:

ERASE: SEQUENCE <X> ARE YOU SURE?
PRESS "Y" OR "N"

If you're sure, press "Y" and the current Sequence your Sequence cursor is on is history. Notice that the MEMORY remaining may increase when you ERASE a Sequence.

F3 SONG

Use F3 to go to the SONG Menu of MIDI STUDIO (see Chapter Four).

F5 DISK

F5 gives you a DISK MENU, selections of disk operations. The DISK MENU which you enter from the MAIN MENU performs its LOAD, SAVE, and DELETE operations on the entire contents of MIDI STUDIO memory including all Sequences and the one song in memory.

F2 CHANNEL +

Use F2 to raise the number (1-16) of the MIDI CHANNEL override for the current Track. MIDI STUDIO normally (if no number is displayed in the CHANNEL line) plays back a Track outputting the same MIDI Channel information which was recorded. The CHANNEL + and CHANNEL - selection allow you to assign a different MIDI CHANNEL (and thus a different synthesizer) to a Track for playback.

Using this feature, you can record all your Tracks from one keyboard and then later reassign them to the different instruments as you choose. Consult the owners' manuals of the synthesizers you are using to find out how to assign the MIDI Receive Channel for each synth.

Notice that between the settings "1" and "16" there is a blank space. This allows you to select NO MIDI CHANNEL OVERRIDES, in which case the Track will play whatever Channel information is contained in the Track.

F4 AUTO-CORR

This stands for AUTO-CORRECT, which is also commonly referred to as "quantizing". AUTO-CORRECT is a process which allows you to correct rhythmic irregularities in a Track you have recorded. The AUTO-CORRECT in you MIDI STUDIO is a powerful tool which can greatly enhance the precision of your music.

Make sure the Track cursor is on the Track which you wish to AUTO-CORRECT. Hold down SHIFT and CTRL and press F4 to select the AUTO-CORRECT function. A window appears in the middle of your screen with a list of rhythmic values and a message at the bottom of the screen says:

USE +/- TO SELECT RETURN TO CONTINUE

Press "+" or "-" to move the cursor (the reversed horizontal bar) down or up the list until it is on the note value you want. This value should be the SMALLEST rhythmic value in the Track you are AUTO-CORRECTing.

When you have selected the right value (or "subdivision"), press RETURN. A smaller window appears at the bottom of the screen with the message:

AUTO-CORRECT: TRACK #N
ARE YOU SURE? PRESS "Y" OR "N"

This is your chance to back out in case you have the Track Cursor on the wrong Track or are unsure of the rhythmic value you have selected. AUTO-CORRECT changes the data in the Track permanently (you can't "un-AUTO-CORRECT" the track once it's done), so be sure you have the right Track and subdivision before you press "Y" for yes.

IMPORTANT NOTES

1. AUTO-CORRECT basically takes the Track as you have recorded it and then rounds off each note to occur on the nearest one of the rhythmic values you have chosen, while preserving the note's length. If you have played a note late (or early) BY MORE THAN HALF of the chosen subdivision, the AUTO-CORRECT process will move the note to the next (or previous) one and the result will sound like a mistake. So there is still the need to play the part with reasonable accuracy.
2. Do NOT AUTO-CORRECT Tracks which contain grace notes, guitar-like strums, rolled chords, or other humanoid rhythmic nuances which you want to preserve. AUTO-CORRECT can't distinguish between a grace note and a note that is just a little bit early and treats them just the same, so the subtlety of a grace note can easily be turned into your common everyday clam.
3. If you are unsure which value to choose for an AUTO-CORRECT, it is better to select the smallest value. You can later AUTO-CORRECT again to a greater value if necessary. AUTO-CORRECTing to a greater value first will round all the notes in the Track to that value, and any subsequent correcting of the same Track cannot recover any smaller values.

F6 PROG CHGS

This selection allows you to remove all program changes from the track you have your track cursor on. If you have a Track which contains Program Changes that are unwanted, you can remove them from the entire Track without affecting any of the other data within the Track. Put the track cursor and the track you wish to remove changes from, hold SHIFT and CTRL and press F6; MIDI STUDIO asks you to confirm your action by pressing "Y" or "N" for yes or no.

You can then insert Program Changes back into the music by or recording them on a separate Track. You might want to keep program changes on a separate Track so you can MUTE and UNMUTE them during playback.

F8 ERASE TRK

Use F8 to ERASE a Track that you don't want for whatever reason. Make SURE the Track cursor is on the Track you wish to ERASE, then hold down SHIFT and CTRL and press F8. A message appears in a window at the bottom of the screen which says:

ERASE: TRACK # N ARE YOU SURE?
PRESS "Y" OR "N"

If it is indeed the Track you want to ERASE, press "Y" and that's all there is to it. Notice that the amount of MEMORY remaining may increase when you ERASE A track.

CHAPTER THREE

(This Chapter intentionally omitted)

CHAPTER FOUR

SONG MENU

The upper right hand box of your System Screen labeled "SONG:" is the MIDI STUDIO's Song Box. It allows you to construct, edit and playback a Song. A Song is a chain of up to twelve Sections, made up of Sequences you have recorded with your MIDI STUDIO.

When you play a Song the Sequences you put in your Song Box will be played in the order you have put them. Spaces between Sequences will be ignored. You can use the same Sequence many times in your song, making a longer Song without using anymore Sequence memory.

When in the Song Menu all tape transport controls except for the Space Bar (play) are inactive and thus faded. By pressing the space bar, when in the Song Menu you can play the Song you have created.

The SONG MENU is a three-level Menu of selections which enable you to construct and edit a Song.

F1 SECTION +

Press F1 to move the SECTION cursor (the reverse-field rectangular bar) down the list of SECTIONS. Each SECTION may contain one Sequence, and when you play the SONG (by pressing the SPACE BAR, as you did in SEQUENCE MODE), the Sequences are played in the order you specify in your list of SECTIONS.

F3 SEQUENCE +

Use F3 to select which Sequence will be played in the current SECTION. Hold down F3 and notice the Sequence letters (A-H) cycling along between the brackets at the left of the SECTION cursor. If you have named any of your Sequence, their names will appear on the line to the right of the brackets, and the information displayed on the TRACK, and CHANNEL lines will also be updated.

When you see the Sequence you wish to have played in the current SECTION, release the F3 key and press the F1 key to move the SECTION cursor down to the next SECTION. Then press F3 to select the Sequence you wish to have played in that SECTION. This is how you build a SONG in MIDI STUDIO. It's that simple.

F5 INSERT

Use F5 to INSERT a blank SECTION into your list of Sequences. The INSERT function moves the Sequence in the current SECTION (and all following SECTIONS) one position down the list and INSERTS a blank where the SECTION cursor is. If you do an INSERT when a Sequence has been selected in SECTION #12, that Sequence will disappear from the end of the list.

F7 EXIT

An EXIT from the SONG MENU takes you back to the MAIN MENU.

LEVEL TWO (SHIFT)

F2 SECTION

Press F2 to move the SECTION cursor up the list of SECTIONS.

F4 SEQUENCE

Press F4 to move backwards through the eight Sequences, from H to A.

F6 DELETE

Use F6 to DELETE the current SECTION from your list of Sequences. The DELETE function removes the Sequence from the current SECTION and moves all following SECTIONS up one position on the list. It does not DELETE the Sequence from the computer's memory or in any way affect the Sequence data.

F8 EXIT

Exits you back to the Main Menu (Same as F7).

LEVEL THREE (CTRL)

F1 ERASE SNG

This stands for ERASE SONG. Hold down CTRL and press F1 to erase the SONG. MIDI STUDIO asks you for your confirmation; if you press "Y", the SONG is ERASED immediately.

ERASE SONG does just that - it ERASES the SONG, but it doesn't affect the individual Sequences in the computer's memory or the other SONGS in the SET. All that will be ERASED is the list of Sequences currently on the screen and the SONG name (if any).

F3 NAME SONG

Hold down CTRL and press F3 to name Song which is currently in the computer's memory. The screen fades, a cursor and eight periods (".....") appear in the upper right corner of the screen just to the right of the word "SONG:" and a message appears at the bottom of the screen which reads:

ENTER NAME & PRESS RETURN TO CONTINUE

You can enter as many as eight characters (letters, numbers, ".", and "/" are accepted). Press RETURN when the name is right. You will then see the Song Menu re-appear at the bottom of the screen.

F5 NO FUNCTION

F7 EXIT

Takes you back to the System screen MAIN MENU.

CHAPTER FIVE

HIDDEN COMMANDS

Hidden Commands are those commands which are activated by pressing a key which is not displayed on a Menu. Some of the most powerful functions of your MIDI STUDIO are called by Hidden Commands, so you should read this chapter very carefully.

"LIVE" COMMANDS

"Live" Commands are those which are active while the Sequence is being Played or Recorded. Some of them, like mute and unmute work whether the Sequence is running or stopped.

"LIVE" PUNCH (P)

To do a "LIVE" PUNCH, first MAKE SURE THE TRACK CURSOR IS ON THE TRACK YOU WISH TO PUNCH. Then Play the Sequence With the Sequence Playing, press "P" on your Commodore keyboard when you want the PUNCH to start. The border of your screen flashes (back to blue) and the Playback continues to the END of the Sequence (unless you stop it). If you don't punch OUT, MIDI STUDIO will punch you out automatically at the END of the Sequence. It's that simple.

IMPORTANT NOTES

1. "LIVE" PUNCH (yellow), will record whether you play any notes or not. This means that it will ERASE any data on the current Track from the point where you punch IN to the point where you punch OUT. "LIVE" PUNCH doesn't give you any warning or confirmation messages - it is designed to be quick and simple to use. But that means you should be very careful when you use it; always check the Track cursor and don't forget to punch OUT when you have finished the part of the Track you mean to PUNCH.
2. You can do only ONE "LIVE" PUNCH on each pass thru the Sequence. MIDI STUDIO needs a few fractions of a second after a PUNCH to organize the data in the Track, which it does as soon as you stop the Playback. If you have several places in one Track you wish to PUNCH, you will have to do it in several passes through the Sequence (although it isn't necessary to Play the entire Sequence each time.)

MUTE (#1-8)

To MUTE a recorded Track (or defeat its Playback) in MIDI STUDIO, all you need to do is to press its number on the Commodore keyboard (whether the Sequence is running or not). Its reversed number or name in the TRACK line turns black (if it is the current Track only the middle of its number or name turns black) to indicate that it has been MUTED and will not be Played. If you wish to MUTE all recorded Tracks at the same time, hold down the LEFT ARROW key and press ZERO ("0").

To UNMUTE the Track, press its number again - its number or name returns to its normal color and Playback of that Track is enabled. If you have a number of Tracks MUTED and you wish to UNMUTE them all at the same time, press ZERO ("0") on your Commodore keyboard. All recorded Tracks will return to their normal colors and have their Playbacks enabled.

When you SAVE a Sequence or Song on a diskette, the MUTES currently in effect are saved as part of the data - the next time you LOAD that Sequence or Song the same Tracks will be MUTED as when you SAVED it. This allows you additional ease of operation and musical flexibility.

SOLO (LEFT ARROW and #1-8)

To SOLO a recorded Track (to play it back by itself), hold down the LEFT ARROW key and press the number of the Track you wish to SOLO (whether the Sequence is running or not). The names or numbers of all recorded Tracks except the ones whose number you pressed turn black and their Playbacks are defeated. If the Sequence is running, you will hear ONLY the Track you have chosen to SOLO. To UNMUTE all recorded Tracks, press ZERO ("0").

F1

Press F1 any time during Playback of a Sequence or a Song to stop the Playback at the END of the Sequence or Song.

F7

When you are recording the first Track of a Sequence, pressing F7 (after you have held down "/" and pressed the SPACE BAR) will start the Recording process immediately, rather than waiting for the first note you play. This allows you to Record a Sequence with a rest (or silence) at the beginning.

RETURN

During Playback, RETURN acts as a "pause" control. The first time you press RETURN stops the Playback, and the second time you press it starts it again. MIDI STUDIO waits one beat and then resumes playback on the next even beat.

For example, if your METER is 4/4 and you want Playback to resume on "1", press RETURN after "3" but before "4" - MIDI STUDIO waits one beat (or until after "4") and then resumes the Playback on the next even beat, which is "1".

The PAUSE function is not active during Record.

In ANY Clock mode, the pause control (RETURN) stops only the MIDI STUDIO Sequence, any drumbox or outboard sequencer you may be using will continue.

OTHER COMMANDS

The following is a list of one-key commands which perform various functions in your MIDI STUDIO. These commands are NOT active during Playback/Record operations.

LETTER C

Turns the COUNT DOWN feature on and off (see Chapter One).

LETTER M

Turns the MIDI DRUM output on and off (see Chapter One).

LETTER O

Press the letter "O" on your Commodore keyboard to send an OMNI MODE OFF/POLY MODE ON command over all MIDI Channels. Some synthesizers, when they are first turned on, come up in OMNI MODE, which means they have MIDI Receive enabled for all MIDI Channels - they will play all the music being played by your MIDI STUDIO, in spite of any MIDI CHANNEL Assignments you may have made.

If this is the case, press the letter "O" to send the OMNI MODE OFF/POLY MODE ON command to all Channels. It will affect all units which you have connected to the MIDI OUT jack on your MIDI Interface card and which are turned on at the time you press "O". After you press "O", your synths will play information coming from only the specific MIDI Channel to which they are assigned. If you don't want certain synths to receive this command, be sure they are turned off or disconnected when you press "O". Then turn them on or reconnect them.

LETTER Z

Press the letter "Z" to send a ZERO Pitch and Mod Wheels command over all MIDI Channels. Most synthesizers read this as a command to zero the Pitch and Mod Wheel values, which will have the effect of centering the Pitch Wheel and turning the Mod Wheel all the way down. Use this command to ZERO all your synths' wheels after a Playback or Record which may leave the wheels in a non-zero position.

POUND SIGN

Moves the CTR Counter to the CUE point (see the AUTOPUNCH discussion in Chapter Two).

RUN/STOP and RESTORE

Hold down the RUN/STOP key and press RESTORE (firmly) to ERASE all Sequences and Songs currently in the computer's memory. MIDI STUDIO asks you for a confirmation, and, if you press "Y" for yes, takes you to the beginning PPQN select screen. Use this command to clear the computer's memory or to set a new PPQN, but remember that EVERYTHING IN MIDI STUDIO MEMORY IS ERASED.

UP ARROW

Any time you see a flashing menu at the bottom of your screen you can press the up arrow key for an immediate return to the SEQUENCE MAIN MENU.

CHAPTER SIX

DISK MENU

The DISKette Menu is a two Level Menu.

Most disk operations you will need when using MIDI STUDIO are provided on the System disk menu. If you wish to perform disk functions not on these menus you should consult your Commodore reference manual.

When using the disk menu commands you may occasionally see the message:

DISK ERROR ... PRESS RETURN

This message will appear if any disk error is encountered. The usual disk errors include:

- (1) An improperly connected disk drive
- (2) An open disk drive door
- (3) An attempted save to a write protected diskette
- (4) Disk operations to an unformatted diskette
- (5) No disk in the disk drive slot

If you encounter a disk drive error check to see if the source is one of these common errors. If it is not you may have a bad diskette. Try the operation with another formatted disk. Its a good idea to periodically save your Songs to more than one diskette creating a backup.

Remember to keep your diskettes away from dirt and magnetic fields (such as loudspeakers). Never touch the exposed area on your diskettes and keep them in a diskette envelope when not being used.

On diskettes a Song is saved as the letters SNG - followed by the eight letter names given in the save operation. When you save a Song on a diskette the entire contents of MIDI STUDIO memory will be saved including all sequences and the one song you have created.

Before performing any disk operation, be sure you have a data disk in your drive. If you try to perform an operation with out a disk in the drive the Screen will display a "DISK ERROR" message.

LEVEL ONE

F1 SEQUENCE +

Pressing F1 in the Disk screen allows you to move forward through the various Sequence letters.

F3 DISK LOAD

Pressing F3 allows you to load an entire Song into MIDI STUDIO. A Song includes one Song descriptor and all Sequences in MIDI STUDIO memory. When you load a Song into MIDI STUDIO, all Sequence and Song descriptors previously in memory are lost. After pressing F3 you will see the message:

LOAD SONG:.....
ENTER NAME AND PRESS RETURN TO CONTINUE

Enter the eight letter (or less) name of the Song you would like to load and press return. After entering the name and pressing return the MIDI STUDIO will ask you for confirmation and warn you that the other things in memory will be erased when the Song load is performed. If you wish to go ahead and load the Song answer "Y" (yes).

Disk Loads may result in the following message:

FILE NOT FOUND...PRESS RETURN

If you encounter this message you should be sure you have correctly entered the Song name and that you have the proper diskette in the disk drive. If you aren't sure of the file name you may wish to verify it by using the directory command. (see directory)

F5 DISK SAVE

Pressing F5 in the Disk Menu will result in the message:

SAVE SONG:.....
ENTER NAME AND PRESS RETURN TO CONTINUE

If you wish to save the Song which includes one Song descriptor and all Sequences in memory you should enter a name (up to eight character) and press return. If you enter no name and press return you will go return to the Disk menu. Entering a name of a Song which has been previously recorded will result in a warning message which will ask you if you wish to replace the previously saved Song with the new Song. If you wish to replace the old song with the song currently in memory press "Y" (yes). If you don't wish to replace the old Song set press "N" (no), go back to the disk save selection on the menu and give the Song a different name.

F7 EXIT

Pressing F7 in the System screen returns you to the MAIN Menu. F7 in the Song Screen returns you to the SONG Menu.

LEVEL TWO (Shifted)

F2 SEQUENCE

Moves the Sequence Cursor from right to left.

F4 DIRECTORY

Pressing the F4 will give you the directory of the diskette currently in your drive. The first line of the disk directory will display the name you gave the diskette in the New Disk command (see below). All files on the diskette will be displayed including non-Song files. Any Songs on diskette will be preceded by SNG. If there is more than one page of directory entries press RETURN to view the additional pages. When you are on the last page of directory entries RETURN will take you back to the Disk Menu.

F6 DELETE

The delete command allows you to delete (scratch) Songs you would like to remove from one of your diskettes.

Pressing F6 brings up the message:

DELETE SONG:.....
ENTER NAME & PRESS RETURN TO CONTINUE

Enter the name of the Song you wish to remove from your diskette, be sure the proper diskette is in the drive and press RETURN. If the Song you have specified is not on the diskette you will be returned directly to the Disk Menu. If this happens check to be sure you have the correct name and diskette. If the Song is on the disk you will be asked to confirm that the Song is to be deleted. If you have changed your mind and don't wish to delete the Song you may press "N" (no) here.

IMPORTANT NOTE:

When you use the Delete command make absolutely sure you want the files you specify deleted. Once deleted there is no way to recover the Song you have scratched.

F8 NEW DISK

The NEW DISK function allows you to format new diskettes on which you can save your Songs. A diskette fresh out of the box requires formatting before it can be used at all.

IMPORTANT NOTE:

Formatting an old diskette erases everything previously on the diskette. So if you're going to reformat an old diskette make sure there's nothing on it you need to save.

After pressing the NEW DISK command you will be asked to insert the disk you would like to format in the drive and press RETURN. After pressing RETURN you may enter up to a sixteen character name for your diskette. After entering the name and pressing RETURN you will be asked to confirm that you want the diskette formatted. Pressing "N" (no) exits you back to the Disk Menu. Pressing "Y" (yes) starts the formatting process which takes very little time for a previously formatted disk and about three to four minutes for a new disk.

APPENDIX A

MIDI STUDIO MENU MAP

MAIN MENU

Control		f1		f3		f5		f7
Regular		sequence+		track+		set end		name seq
Shifted		sequence-		track-		append seq		tempo
Ctrl		erase seq		SONG		DISK(seq)		- - -
Shft/Ctrl		channel +		auto-corr		prog chgs		erase trk

SONG MENU

Control		f1		f3		f5		f7
Regular		section+		sequence+		insert sec		exit
Shifted		section-		sequence-		delete sec		exit
Ctrl		erase sng		name song		- - - -		exit
Shft/Ctrl		- - - -		- - - -		- - - -		- - - -

DISK MENU

Control		f1		f3		f5		f7
Regular		sequence +		disk load		disk save		exit
Shifted		sequence -		directory		delete		new disk
Ctrl		----		----		----		----
Shft/Ctrl		----		----		----		----

OTHER MIDI STUDIO COMMANDS

TRANSPORT COMMANDS

- space bar - start/stop play & stop record
- / and space bar - start record
- left/right cursor - fast forward (by even beats)
- up/down cursor - fast reverse (by even beats)
- + - forward by 1 click
- - backward by 1 click
- home - set counter to start (001:01:01), or if in song go to the first song element.
- shifted home - go to end of sequence (only if set), or if in song go to last song element.

SPECIAL PLAYBACK or RECORD COMMANDS

- f1 - if hit during playback stops play at end of sequence or song
- f7 - when hit on first track recording starts record (rather than waiting for the first note)
- return - pause control during playback. When hit first time stops play. Hit again waits till next beat to start

LIVE COMMANDS (those commands active while transport is moving)

- #'s 1 to 8 - Toggle mute unmute of individual tracks
- Left arrow & #'s - Solo's voice # hit
- # 0 - Unmutes all tracks
- Left arrow & # 0 - Mutes all tracks
- Letter P - Live punch in/out. When first hit turns punch in on & when hit again punches out. If not hit again uses sequence end for out

OTHER COMMANDS

- Letter C - Toggles Overdub count off. Count off given only when overdubbing from start of track (on when indicator lit)
- Letter M - Toggle midi clock byte sends (\$F8's, FA's, & \$FC's). If on sends midi timing bytes in all clock modes. Can be used to automatically control MIDI Drum boxes.
- Up Arrow - When pressed always takes user to main menu
- Run/Stop-Restore- Erases everything in memory and takes user to opening PPQN menu

APPENDIX B

(Note pulse number at different PPQN)

The following Table gives the pulse numbers for various note values for different PPQN settings:

-----Note Value-----								
	QRTR:	1	-	-	-	-	-	-
	8-th:	1	-	-	-	2	-	-
	16-th:	1	-	2	-	3	-	4
	32-nd:	1	2	3	4	5	6	7
PPQN								
24	"PLS":	01	04	07	10	13	16	19
48	"PLS":	01	07	13	19	25	31	37
96	"PLS":	01	13	25	37	49	61	73

EXAMPLE: at a PPQN of 24 the forth sixteenth note within any quarter-note begins at "PLS" (pulse) 19; at a PPQN of 48 the same sixteenth begins at "PLS" 37; and at a PPQN of 96 it begins at "PLS" 73.

